

THREE NEW SPECIES OF THRIPS LINNÉ FROM THE
WESTERN UNITED STATES

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The types of the new species described below are in author's collection. The illustrations were made by Miss Helen Rearwin and Miss Inez D'Amanda.

***Thrips pallidicollis* Hood, sp. nov.**

Cut 1 (figs. 1-4).

Female (macropterous). Length about 1.1 mm. General color dark brown, head and abdomen darker and blackish, pterothorax distinctly paler than either; *prothorax pale yellowish* abruptly lighter than head; legs light yellowish brown, excepting tarsi and apices of femora and tibiae, which are yellow; fore wings pale yellowish brown, scarcely paler at base; antennae blackish brown, with apex of segment 2, all of 3, and usually the basal portion of 4 yellowish; all body and wing bristles yellowish brown; ocellar pigmentation red.

Head about 1.2 times as wide as median dorsal length, about as long as pronotum, broadest midway between eyes and base, the transverse anastomosing lines distinct; cheeks rather strongly arched; vertex flattened, not forming an overhanging angulation but sloping nearly evenly from ocelli to frontal costa, this last deeply and somewhat acutely notched; interocellar and postocellar bristles short, subequal, somewhat longer than postoculars but scarcely as long or as heavy as the median pair on posterior margin of prothorax; ventral surface of head with the two pairs of bristles near bases of antennae not attaining apex of first antennal segment. Eyes about 0.54 as long as head, hardly 0.7 as wide as their interval, pilose as usual. Ocelli situated about opposite middle of eyes. Antennae (cut 1, fig. 2) about 2.25 times as long as head, of normal structure; segment 3 usually slightly longer than 6, the latter about 2.2 times as long as wide and 2.6 times as long as 7, the sense cone on its inner surface not abbreviated, surpassing apex of segment. Maxillary palpi three-segmented, as usual, the segments measuring 12, 10, and 18 microns respectively.

Prothorax about 1.6 times as wide as median dorsal length, with distinct, dark, equally-spaced, anastomosing lines of sculpture on notum, sides gently rounded, perhaps slightly converging anteriorly; bristles at posterior angles rather short, stout, and nearly straight, the inner pair 64 microns long, the outer pair 50 microns long; posterior margin with three pairs of bristles, the innermost pair subequal to midlaterals and somewhat longer and stouter than postocellars; other bristles on pronotum hardly equal to post-

ocellars, excepting one pair near anterior margin and two pairs at anterior angles. Wings of fore pair (cut 1, fig. 3) with about 22 bristles on costal margin, 4+3 at base of anterior vein and typically 1+1 near apex, and ordinarily about 9 on posterior vein (though varying from 8 to 11).

Abdomen of normal form; tergite 8 with the comb on posterior margin broadly interrupted at middle; posterior margin of tergite 9 with bristles of inner pair 100 microns long, outer pair 122 microns, lateral pair 112 microns; posterior margin of tergite 10 with bristles of inner pair 98 microns, outer pair 92 microns; sternites with the usual three pairs of long bristles on extreme posterior margin, but without accessory bristles.

Measurements of holotype (♀): Length 1.08 mm.; head, length 0.114 mm., greatest width (across cheeks) 0.139 mm., width across eyes 0.132 mm.; eyes, length 0.062 mm., width 0.038 mm., interval 0.056; prothorax, median dorsal length of pronotum 0.118 mm., greatest width 0.188 mm.; pterothorax, width 0.232 mm.; fore wings, length 0.698 mm., abdomen, greatest width 0.278 mm.

Antennal segments:	1	2	3	4	5	6	7
Length (microns):	24	36	49	43	38	47	20
Width (microns):	29	25	20	20	19	21	7
Total length of antenna 0.257 mm.							

Described from eleven females, as follows: Colorado, Grant, July 19, 1916; sweeping, L. O. Jackson, 5 ♀ ♀ [*holotype* and *paratypes*]; Grant, July 21, 1916, sweeping, L. O. Jackson, 2 ♀ ♀ [*paratypes*]; Grant, July 24, 1916, sweeping, L. O. Jackson, 1 ♀ [*paratype*]. Utah, Currant Creek, July 22, 1917, sweeping flowers at an altitude of 8,000 ft., James Silver, 3 ♀ ♀ [*paratypes*].

The dark color and the broadly interrupted comb on the posterior margin of tergite 8 ally this new species with *magnus*, *spinosus*, *varipes*, *madronii*, and *fuscipennis*. The pale pronotum, however, is a thoroughly constant character serving to identify it readily. There is some variation in the number of bristles in the distal portion of the anterior vein, three of the specimens possessing an additional one at the apical two-fifths (on one wing only), making three bristles in all. The typical number is clearly two, however, while in all the allied species it is three. Another structural difference between this and the closely related *fuscipennis*, evident in a series of specimens, is the longer third antennal segment which usually exceeds the sixth in *pallidicollis* but which in *fuscipennis* is invariably shorter than the sixth

Thrips sieversiae Hood, sp. nov.

Cut 2 (figs. 1-4).

Female (macropterous). Length about 1.4 mm. Color nearly uniform dark brown, with perhaps the head, prothorax, and tip of abdomen averaging somewhat darker; legs brown, with fore tibiae, all tarsi, and both ends of hind tibiae largely yellow; fore wings yellowish brown, darker at extreme tip; antennae concolorous with body excepting segment 3 which is pale yellow in pedicel and shading to yellowish brown at apex; body and wing bristles yellowish brown; ocellar pigmentation orange-red.

Head about 1.31 times as wide as median dorsal length, about 0.81 as long as pronotum, slightly broadest across eyes, the transverse anastomosing lines dark and distinct; cheeks somewhat flattened; vertex flattened, not forming an overhanging angulation but sloping nearly evenly from ocelli to frontal costa, this last deeply and acutely notched; interocellar and postocellar bristles short, subequal, somewhat longer than postoculars but scarcely as long or as heavy as the median pair on posterior margin of prothorax; ventral surface of head with the two pairs of long bristles near base of antennae, the inner pair much the longer and reaching beyond base of second antennal segment. Eyes about 0.57 as long as head and about 0.7 as wide as their interval, prominent because of their size but not distinctly protruding, pilose as usual. Ocelli situated slightly in advance of middle of eyes. Antennae (cut 2, fig. 2) long, about 2.57 times as long as head, of normal structure, segment 3 slightly shorter than 6, the latter fully 2.6 times as long as wide and 2.4 times as long as 7, the sense cone on its inner surface short, not attaining apex of segment.

Prothorax about 1.46 times as wide as median dorsal length, with distinct, equally-spaced, anastomosing lines of sculpture on notum, sides gently rounded and distinctly converging anteriorly; bristles at posterior angles rather long and strong, only slightly curved, the inner pair about 84 microns long, the outer pair about 76 microns long; posterior margin with three pairs of bristles, the innermost pair longer and stouter than the others and subequal to midlaterals; other bristles on pronotum shorter and weaker. Wings of fore pair (cut 2, fig. 4) with about 22 bristles on costal margin, 4+3 at base of median vein and 1+1+1 in distal two-fifths, and usually 10 (9-12) on posterior vein.

Abdomen moderately broad; tergite 8 with the comb on posterior margin broadly interrupted at middle; posterior margin of tergite 9 with bristles of inner pair 114 microns long, outer pair 131 microns and lateral pair 148 microns; tergite 10 with bristles of inner pair 122 microns, outer pair 118 microns; sternites with the usual three pairs of long bristles on extreme posterior margin but without accessory bristles.

Measurements of holotype (♀): Length 1.43 mm.; head, length 0.110 mm., width across eyes 0.146 mm., width just behind eyes 0.138 mm., width across cheeks 0.145 mm.; eyes, length 0.063 mm., width 0.043 mm. interval 0.060 mm.; prothorax median length of pronotum 0.135 mm., greatest width 0.198 mm.; pterothorax, greatest width 0.272 mm.; fore wings, length 0.795 mm.; abdomen, greatest width 0.320 mm.

Antennal segments:	1	2	3	4	5	6	7
Length (microns):	27	41	54	45	37	56	23
Width (microns):	32	27	22	22	20	21	9
Total length of antenna 0.283 mm.							

Male (macropterous). Length about 0.93 mm. Color and structure much as in female. Sternites 3-7 with transversely elliptical tympana, that on 3 about five times as wide as long; tergite 9 with two pairs of bristles in a nearly straight line across middle and a third pair of slightly longer bristles caudad and slightly laterad of the median pair.

Measurements of allotype (♂): Length 0.930 mm.; head, length 0.096 mm., width across eyes 0.140 mm., width just behind eyes 0.133 mm., width across cheeks 0.142 mm.; eyes, length 0.060 mm., width 0.041 mm., interval, 0.058 mm.; prothorax, median length of pronotum 0.116 mm., greatest width 0.188 mm.; fore wings, length 0.600 mm.; abdomen, greatest width 0.240 mm.

Described from seven females and two males taken at Grant, Colorado, July 19, 1916, by L. O. Jackson, on *Sieversia ciliata*.

In Priesner's key to the European species, if the abdomen be considered "ungewöhnlich breit", this runs to *robustus* and *dilatatus*; but in both of these segment 3 of the antenna is much narrowed apically. If, on the other hand, the abdomen be considered of normal breadth, this species runs to *paluster* and *menyanthidis*; but from these it differs in the short sense cone on segment 6 of the antenna.

Among the North American species, it takes a natural position near *fuscipennis*, agreeing with it and its relatives in having three pairs of small bristles on the posterior margin of the pronotum between the two large pairs at the posterior angles; in having the comb on the posterior margin of abdominal tergite 8 broadly interrupted at middle; and in having the fore wing provided in the distal half of the median vein with three instead of two bristles. It comes closest, perhaps, to *magnus*, a California species in which the sense cone on the inner surface of the sixth antennal segment is likewise short and scarcely attains the

tip of the segment. From *magnus*, however, it differs in having segment 6 of the antenna slightly longer instead of distinctly shorter than 3; in having segment 5 twice as long as 7; in having the antennæ, particularly segment 3, decidedly paler; and in having the fore wings pale brown and decidedly lighter than the body.

Thrips sambucifloris Hood, sp. nov.

(Cut 3, figs. 1-4).

Female (macropterous). Length about 1.3 mm. Color dark blackish brown, with red or orange-red pigmentation in pterothorax; legs blackish brown, with all tarsi, both ends of mid and hind tibiæ, and most of fore tibiæ pale grayish yellow; fore wings pale gray (nearly white) in basal fourth and dark brownish gray beyond, the veins darker; antennæ dark blackish brown, 2 darker than 1, 3 decidedly the lightest in entire antenna, grayish or brownish yellow and clouded with blackish brown in distal half, 4-7 dark blackish brown, 4 and 5 narrowly paler just beyond pedicel; body and wing bristles dark brown; ocellar pigmentation red.

Head about 1.27 times as wide as median dorsal length, about 0.92 as long as pronotum, broadest slightly behind eyes, the transverse anastomosing lines dark and distinct; cheeks rounded, slightly converging posteriorly; vertex flattened, sloping evenly from ocelli to a slight angulation above antennal base, the frontal costa acutely but roundly notched; interocellar and postocellar bristles sub-equal, distinctly longer than postoculars but scarcely as long or as heavy as the median pair on posterior margin of prothorax; ventral surface of head with the two pairs of bristles near bases of antennæ, the inner pair much longer and reaching beyond base of second segment. Eyes about 0.55 as long as head and about 0.8 as wide as their interval, prominent because of their size but not distinctly protruding, pilose as usual. Ocelli situated slightly in advance of middle of eyes. Antennæ (cut 3, fig. 2) about 2.37 times as long as head, of normal structure, segment 3 longer than 6, the latter about 2.36 times as long as wide and 2.6 times as long as 7, the sense cone on its inner surface surpassing apex of segment.

Prothorax about 1.26 times as wide as median dorsal length,* with distinct, equally-spaced, anastomosing lines of sculpture on notum; sides rounded and slightly converging anteriorly; bristles at posterior angles of moderate length, strong, somewhat curved, and conspicuous because of their dark color, the inner pair about 76 microns long, the outer pair 66 microns long; posterior margin with three or four pairs of small bristles between the two long

*The specimen figured (Cut 3, Fig. 1) has apparently been somewhat flattened by the pressure of the cover glass.

Antennal segments:	1	2	3	4	5	6	7
Length (microns):	26	38	54	47	40	52	17
Width (microns):	27	25	19	20	19	20	7
Total length of antenna 0.274 mm.							



Explanation of Cut 1.

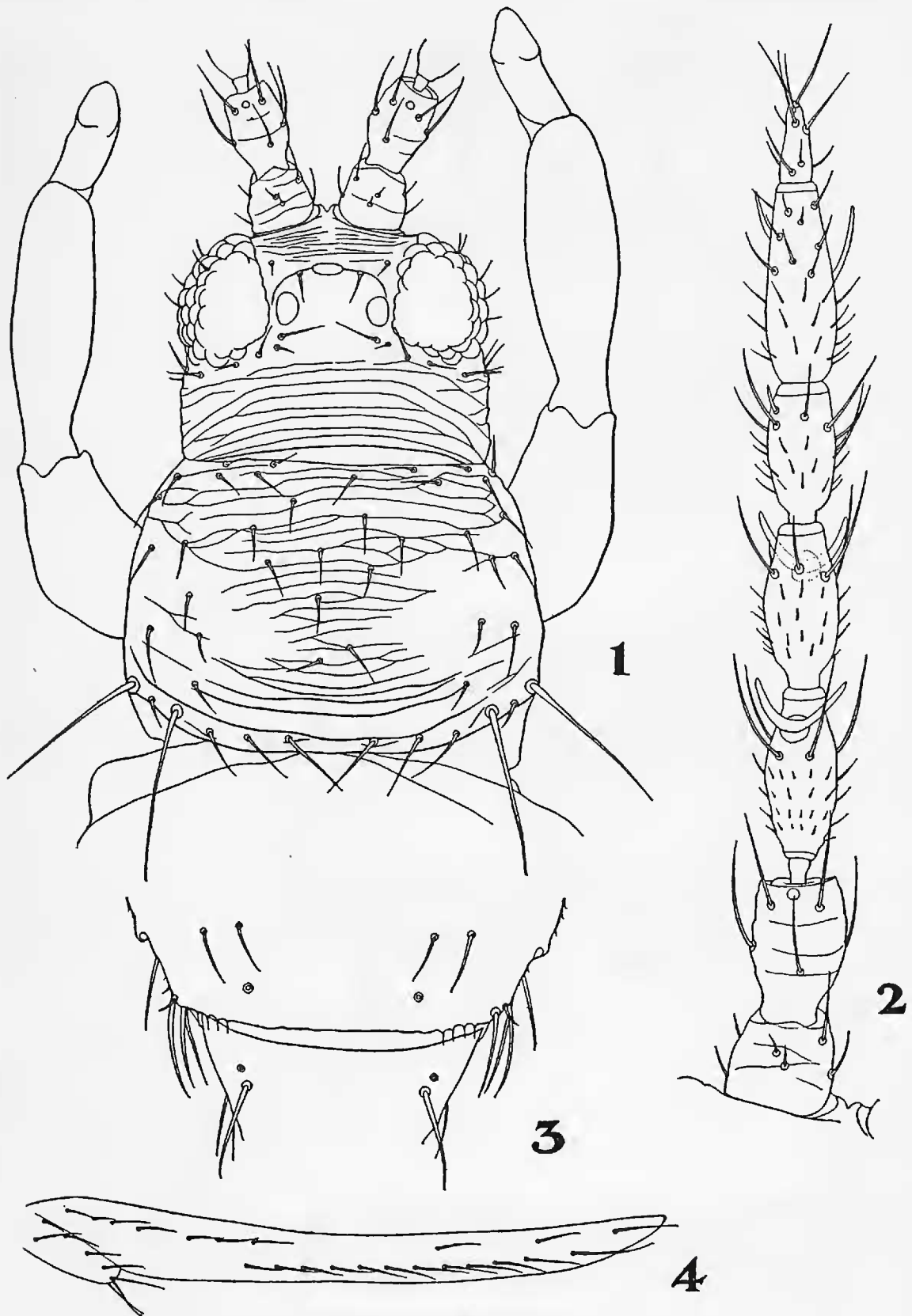
Thrips pallidicollis sp. nov.

Fig. 1.—Head and prothorax, ♀, holotype (all leg bristles omitted).

Fig. 2.—Left antenna, ♀, holotype.

Fig. 3.—Right fore wing, ♀, holotype; diagram illustrating chaetotaxy of veins.

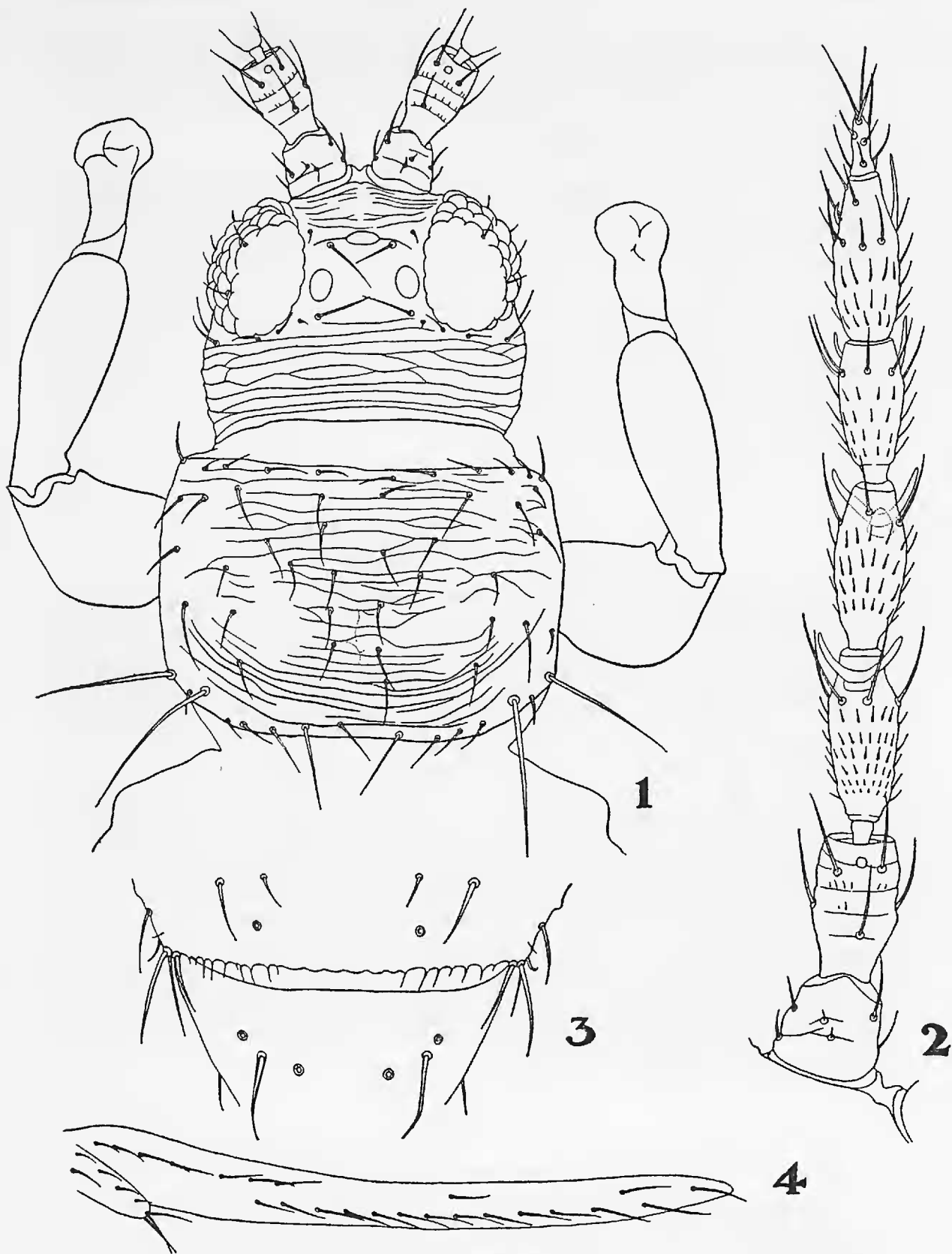
Fig. 4.—Portions of tergites 8 and 9, ♀, paratype, showing the interrupted comb on posterior margin of 8.



Explanation of Cut 2.

Thrips sieversiae sp. nov.

- Fig. 1.—Head and prothorax, ♀, holotype (all leg bristles omitted).
 Fig. 2.—Left antenna, ♀, holotype.
 Fig. 3.—Portions of tergites 8 and 9, ♀, holotype, showing the interrupted comb on posterior margin of 8.
 Fig. 4.—Right fore wing, ♀, paratype; diagram illustrating chaetotaxy of veins.



Explanation of Cut 3.

Thrips sambucifloris sp. nov.

- Fig. 1.—Head and prothorax, ♀, holotype (all leg bristles omitted).
 Fig. 2.—Left antenna, ♀, holotype.
 Fig. 3.—Portions of tergites 8 and 9, ♀, holotype, showing the interrupted comb on posterior margin of 8.
 Fig. 4.—Right fore wing, ♀, holotype; diagram illustrating chætotaxy of veins.

Described from two females and fifteen males taken by the writer near Korbel, California, July 28, 1927, in flowers of *Sambucus racemosa* L. [Hood No. 710]. Males were very abundant, but only two females were seen.

This is another species of the *fuscipennis* group. It is readily distinguishable from *pallidicollis* by the dark coloration and the greater number of wing bristles; from *sieversiae* and *magnus* by the longer sense cone on the inner surface of the sixth antennal segment; from *spinosus* by the shorter interocellar bristles; and from *fuscipennis* and *varipes* by the lack of a tympanum on abdominal sternite 7 in the male, as well as by numerous details of body structure and color.

ATTRACTION OF BEETLES TO TAR

For the past two years I have noticed the attraction of certain beetles to fresh tar. The observations were made at Ben Lomond, Santa Cruz County, California, in May, June, and July of 1932 and 1933. The species most abundant was the Lucanid, *Platycerus agassizi* Lec, which assembled in large numbers near the fresh tar on dirt roads; all of the specimens but three were males and were caught either in the tar or flying at a height of six or eight inches above the tar. Diligent search in other nearby roads which had not been tarred availed nothing in the way of this Lucanid; I have now taken a very large series of this species while in previous years, before collecting in the tar, I obtained only two or three a season. The only other beetle found there in numbers was the Ostomid, *Temnochila virescens* (Fab.).—Lawrence W. Saylor.

TWO NEW RECORDS OF ARIZONA HEMIPTERA

Largidea marginata Van D. described from a series of specimens taken by Mr. Van Duzee on scrub oak at Salida, Colorado, and apparently not taken since. The author beat a single specimen from *Pinus edulis* at Yavapi Point on the South Rim of the Grand Canyon, Arizona, on June 7, 1930. It has been compared with the type and agrees perfectly with the Colorado specimens.—R. L. Usinger.